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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,722	09/22/2003	Leon Benhamou	1400.1375150	9692
25697	7590	11/21/2007	EXAMINER	
ROSS D. SNYDER & ASSOCIATES, INC. PO BOX 164075 AUSTIN, TX 78716-4075			PUENTE, EMERSON C	
ART UNIT		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/667,722	BENHAMOU ET AL.	
	Examiner	Art Unit	
	Emerson C. Puente	2113	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 24 September 2007.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-8,10-48,50,51 and 53-55 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) 37-48,50,51 and 53 is/are allowed.
 6) Claim(s) 1-3,5,6,10-14,19,23-33,35,54 and 55 is/are rejected.
 7) Claim(s) 4,7,8,15-18,20-22,34 and 36 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 22 September 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date: _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is made Non-Final.

Claims 1-8,10-48,50,51 and 53-55 have been examined. Claims 9,49, and 52 have been cancelled.

Specification

The abstract of the disclosure is objected to because the abstract is not in a single paragraph of 150 words or less. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 55 is rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,978,398 of Harper et al. referred hereinafter “Harper ‘398”.

Examiner notes that Harper ‘398 (see column 1 lines 8-12) incorporates by reference US Patent No. 6,629,266 of Harper et al. referred hereinafter “Harper ‘266”, which is introduced in the rejection below.

In regards to claim 55, Harper ‘398 discloses a data processor program processable by a data processor and an apparatus from which the data processor program is accessible by the data

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processor, wherein the data processor program is capable of enabling the data processor to facilitate:

monitoring a failure prediction parameter of at least one (see column 9 lines 15-20 of incorporated by reference Harper '266) of the plurality of protected system elements (see column 4 lines 23-27 and figure 2 of Harper '266);

correlating a present state of the failure prediction parameter to a failure prediction criterion for determining whether one of said protected system elements has met a failure prediction condition, thereby identifying a failure predicted one of a plurality of protected system elements when the failure prediction condition is met (see column 9 lines 15-20 of incorporated by reference Harper '266);

downloading service information of the failure predicted one of said protected system elements to the protection system element after identifying the failure predicted one of said protected system elements (see column 2 lines 23-26);

confirming failure of the failure predicted one of said protected system elements (see column 2 lines 23-26);

switching communication service supported by the failure predicted one of said protected system elements for being supported by to the protection system element after confirming said failure (see column 6 lines 20-25).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill

in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3,5,6,10,12-14,19,23,27,29-33,35, and 54 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Harper '398 in view of US Patent No. 4,769,761 of Downes et al. referred hereinafter "Downes".

In regards to claim 1, Harper '398 discloses a method of facilitating protection switching, comprising:

identifying a failure predicted one (see column 2 lines 19-23) of a plurality of protected system elements (see column 4 lines 23-27); and

implementing a protection switching operation for switching designated information from the failure predicted one of said protected system elements to a protection system element (see column 2 lines 23-26).

However, Harper '398 fails to explicitly disclose:

wherein identifying the failure predicted on of said protected system elements includes assessing performance of said protected system elements based at least partially on an element demerit point level of each one of said protected system elements.

Downes discloses the concept of predicting a failure upon determination the error count over a selected number of operations is above a criterion or threshold (see column 1 lines 60-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Harper and Downes to further including predicting a failure upon determination the error count over a selected number of operations is above a criterion or threshold, thus indicating wherein identifying the failure predicted on of said protected system elements includes assessing performance of said protected system elements

based at least partially on an element demerit point level of each one of said protected system elements. A person of ordinary skill in the art could have been motivated to combine the teachings because Harper is concerned with detecting degradation of performance of a computer system (see column 1 lines 60-61), and monitoring the error count over a selected number of operations, as per teachings of Downes (see column 1 lines 60-65), constitutes as suitable known means to detect degradation of performance of a computer system.

In regards to claim 2, Harper '398 in view of Downes discloses the claim limitations as discussed above. Harper '398 further discloses wherein identifying the failure predicted one of said protected system elements includes assessing at least one of a plurality of failure prediction parameters of said protected system elements for determining when a failure prediction condition has been met by one of said protected system elements (see column 9 lines 15-20 of incorporated by reference Harper '266).

In regards to claim 3, Harper '398 in view of Downes discloses the claim limitations as discussed above. Harper '398 further discloses

monitoring a failure prediction parameter of at least one of the plurality of protected system elements (see column 9 lines 15-20 of incorporated by reference Harper '266); and
correlating a present state of the failure prediction parameter to a failure prediction criterion for determining whether the failure prediction parameter has met a failure prediction condition (see column 9 lines 15-20 of incorporated by reference Harper '266).

In regards to claim 5, Harper '398 in view of Downes discloses the claim limitations as discussed above. Harper '398 further discloses wherein the monitoring the failure prediction

parameter further comprises bridging the protection system element across the at least one of the plurality of the protected system elements (see column 6 lines 13-17).

In regards to claim 6, Harper '398 in view of Downes discloses the claim limitations as discussed above. Harper '398 further discloses wherein the monitoring the failure prediction parameter further comprises sequentially bridging the protection system element across each of the plurality of the protected system elements (see column 4 lines 23-27 and column 6 lines 13-17).

In regards to claim 10, Harper '398 in view of Downes discloses the claim limitations as discussed above. Downes further discloses wherein assessing performance of said protected system elements includes determining when an element demerit point level of one of said protected system elements has exceeded a predetermined element demerit point threshold limit (see column 1 lines 60-65).

In regards to claim 12, Harper '398 in view of Downes discloses the claim limitations as discussed above. Downes further discloses wherein the element demerit point level corresponds to a quantity of element demerit points accumulated over a designated period of time (see column 1 lines 60-65).

In regards to claim 13, Harper '398 in view of Downes discloses wherein identifying the failure predicted one of said protected system elements includes determining that a rate of change of element demerit points for one of said system elements has exceeded a predetermined element demerit point rate of change (see column 1 lines 60-65).

In regards to claim 14, Harper '398 in view of Downes discloses the claim limitations as discussed above. Harper '398 further discloses wherein identifying the failure predicted one of

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said protected system elements includes determining that a failure prediction parameter corresponding to a service agreement parameter for one of said protected system elements has declined to a predetermined minimal acceptable service agreement parameter level (see column 9 lines 10-15 and column 10 lines 12-15 of incorporated by reference Harper '266).

In regards to claim 19, Harper '398 in view of Downes discloses the claim limitations as discussed above. Harper '398 further discloses:

downloading service information of the failure predicted one of said protected system elements to the protection system element after identifying the failure predicted one of said protected system elements (see column 6 lines 14-17);

confirming failure of the first failure predicted one of said protected system elements (see column 6 lines 18-25); and

switching communication service supported by the failure predicted one of said protected system elements for being supported by to the protection system element after confirming said failure (see column 6 lines 21-25).

In regards to claim 23, Harper '398 in view of Downes discloses the claim limitations as discussed above. Harper '398 further discloses wherein the protection system element provides protection switching functionality exclusively for all of said protected system elements (see column 6 lines 35-40).

In regards to claim 27, Harper '398 in view of Downes discloses the claim limitations as discussed above. Harper '398 further discloses wherein identifying the failure predicted one of said protected system elements includes determining that a failure prediction parameter associated with the failure predicted one of said protected system elements has exceeded a failure

prediction parameter first threshold limit (see column 9 lines 6-10 and 25-28 of incorporated by reference Harper '266).

In regards to claim 29, Harper '398 in view of Downes discloses the claim limitations as discussed above. Harper '398 further discloses wherein the protection system element provides protection switching functionality exclusively for all of said protected system elements (see column 6 lines 35-37).

In regards to claim 30, Harper '398 in view of Downes discloses the claim limitations as discussed above. Harper '398 further discloses configuring protection switching variables associated with the protection switching operation (see column 9 lines 7-14 of incorporated by reference Harper '266).

In regards to claim 31, Harper '398 in view of Downes discloses the claim limitations as discussed above. Harper '398 further discloses:

associating each one of said protected system elements with the protection system element (see column 6 lines 39-42); and

specifying failure prediction criterion for each of said protected system elements (see column 9 lines 7-14 of incorporated by reference Harper '266).

In regards to claim 32, Harper '398 in view of Downes discloses the claim limitations as discussed above. Harper '398 further discloses wherein specifying said failure prediction criterion includes specifying a first type of failure prediction criterion for a first portion of said protected system elements and a second type of failure prediction criterion for a second portion of said protected system elements (see column 9 lines 6-10 of incorporated by reference Harper '266).

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In regards to claim 33, Harper '398 in view of Downes discloses the claim limitations as discussed above. Harper '398 further discloses wherein specifying said failure prediction criterion includes specifying said failure prediction criterion on a per protected system element basis (see column 4 lines 10-15 and column 6 lines 32-37 and column 9, lines 7-14 of Harper '266).

In regards to claim 35, Harper '398 in view of Downes discloses the claim limitations as discussed above. Harper '398 further discloses wherein identifying the failure predicted one of said protected system elements includes assessing a protection switching operation initiation notification issued via a system administrator user interface (see column 4 lines 20-22 of incorporated by reference Harper '266).

In regards to claim 54, Harper '398 discloses an apparatus capable of facilitating protection switching, comprising:

a plurality of protected system element(see column 4 lines 23-27).

a protection system element including a data processor and capable of providing protection switching functionality for at least one of said protected system elements (see column 2 lines 23-26).

a data processor program wherein the data processor program is capable of enabling the protection system elements to facilitate (see column 2 lines 23-26.)

identifying a failure predicted one (see column 2 lines 19-23) of a plurality of protected system elements (see column 4 lines 23-27).

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implementing a protection switching operation for switching designated information from the failure predicted one of said protected system elements to a protection system element (see column 2 lines 23-26).

However, Harper fails to explicitly disclose:

wherein identifying the failure predicted on of said protected system elements includes determining the rate of change of element demerit points for one of said protected system elements has exceeded a predetermined element demerit point rate of change threshold limit.

Downes discloses the concept of predicting a failure upon determination the error count over a selected number of operations is above a criterion or threshold (see column 1 lines 60-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Harper and Downes to further including predicting a failure upon determination the error count over a selected number of operations is above a criterion or threshold, thus indicating wherein identifying the failure predicted on of said protected system elements includes determining the rate of change of element demerit points for one of said protected system elements has exceeded a predetermined element demerit point rate of change threshold limit. A person of ordinary skill in the art could have been motivated to combine the teachings because Harper is concerned with detecting degradation of performance of a computer system (see column 1 lines 60-61), and monitoring the error count over a selected number of operations, as per teachings of Downes (see column 1 lines 60-65), constitutes as suitable known means to detect degradation of performance of a computer system.

Claims 11, 24, 25, 26, and 28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Harper '398 (which incorporates by reference Harper '398 '266) in view of Downes and in further view of US Patent No. 6,771,440 of Smith.

In regards to claim 11, Harper '398 in view of Downes discloses the claim limitations as discussed above. However, Harper '398 in view of Downes fails to explicitly disclose:

wherein the predetermined element demerit point threshold limit is associated with a first level of failure probability, lower than an element demerit point threshold limit corresponding to a next higher level of failure probability.

Smith discloses a system wherein a first threshold triggers a predictive failure analysis and a second threshold greater than the first threshold signifies a failure (see column 6 lines 6-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Harper, Downes, and Smith to include a second threshold that signifies a failure in addition to a first threshold that predicts a failure, indicating wherein the predetermined element demerit point threshold limit is associated with a first level of failure probability, lower than an element demerit point threshold limit corresponding to a next higher level of failure probability. A person of ordinary skill in the art could have been motivated to combine the teachings because Harper discloses a first threshold that predicts a failure is to follow (see column 9 lines 7-14 and lines 25-30 of incorporated by reference Harper '266) and is further concerned with signifying a system element has failed (see column 6 lines 5-25) and having a second threshold that signifies a failure, as per teachings of Smith (see column 6 lines 6-20), provides a known and suitable means to signifying the system element has failed.

In regards to claim 24, Harper '398 in view of Downes discloses the claim limitations as discussed above. Harper '398 further discloses:

wherein identifying the failure predicted one of said protected system elements includes determining that a failure prediction parameter associated with the failure predicted one of said protected system elements has exceeded a failure prediction parameter first threshold limit (see column 9 lines 6-10 and 25-28 of incorporated by reference Harper '266);

Harper further discloses said switching communication service is initiated in response to determining the protected system element has failed. Harper discloses if it is determined that the primary node has failed, then the process continues at which time the secondary node becomes the primary node (see column 6 lines 21-25).

However, Harper '398 in view of Downes fails to explicitly disclose:

said switching communication service is initiated in response to the failure prediction parameter exceeding a failure prediction parameter second threshold limit different than the failure prediction parameter first threshold limit.

Smith discloses a system wherein a first threshold triggers a predictive failure analysis and a second threshold greater than the first threshold signifies a failure (see column 6 lines 6-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Harper, Downes, and Smith to include a second threshold that signifies a failure in addition to a first threshold that predicts a failure, thus indicating said switching communication service is initiated in response to the failure prediction parameter exceeding a failure prediction parameter second threshold limit different than the failure

prediction parameter first threshold limit. A person of ordinary skill in the art could have been motivated to combine the teaching because Harper discloses a first threshold that predicts a failure is to follow (see column 9 lines 7-14 and lines 25-30 of incorporated by reference Harper '266) and is further concerned with signifying a system element has failed (see column 6 lines 5-25) and having a second threshold that signifies a failure, as per teachings of Smith (see column 6 lines 6-20), provides a known and suitable means to signifying the system element has failed.

In regards to claim 25, Harper '398 in view of Downes and Smith discloses the claim limitations as discussed above. Smith further discloses:

wherein the failure prediction first threshold limit is associated with a first level of failure probability and the failure prediction second threshold limit is associated with a second level of failure probability higher than the first level of failure probability (see column 6 lines 12-13).

In regards to claim 26, Harper '398 in view of Downes and Smith discloses the claim limitations as discussed above. Harper '398 further discloses:

wherein identifying the failure predicted one of said protected system elements includes determining that a failure prediction parameter associated with the failure predicted one of said protected system elements has exceeded a failure prediction parameter first threshold limit (see column 9 lines 6-10 and 25-28 of incorporated by reference Harper '266);

Harper further discloses confirming failure includes determining the protected system element has failed (see column 6 lines 21-25).

However, Harper '398 in view of Downes fails to explicitly disclose:

confirming failure includes determining that the failure prediction parameter has exceeded a failure prediction parameter second threshold limit different than the failure prediction parameter first threshold limit.

Smith discloses a system wherein a first threshold triggers a predictive failure analysis and a second threshold greater than the first threshold signifies a failure (see column 6 lines 6-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Harper, Downes, and Smith to include a second threshold that signifies a failure in addition to a first threshold that predicts a failure, thus indicating confirming failure includes determining that the failure prediction parameter has exceeded a failure prediction parameter second threshold limit different than the failure prediction parameter first threshold limit. A person of ordinary skill in the art could have been motivated to combine the teaching because Harper discloses a first threshold that predicts a failure is to follow (see column 9 lines 7-14 and lines 25-30 of incorporated by reference Harper '266) and is further concerned with signifying a system element has failed (see column 6 lines 5-25) and having a second threshold that signifies a failure, as per teachings of Smith (see column 6 lines 6-20), provides a known and suitable means to signifying the system element has failed.

In regards to claim 28, Harper '398 in view of Downes discloses the claim limitations as discussed above. However, Harper '398 in view of Downes fails to explicitly disclose:

wherein implementing said protection switching operation is performed in response to determining that the failure prediction parameter has exceeded a failure prediction parameter second threshold limit different than the failure prediction parameter first threshold limit.

Smith discloses a system wherein a first threshold triggers a predictive failure analysis and a second threshold greater than the first threshold signifies a failure (see column 6 lines 6-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Harper, Downes, and Smith to include a second threshold that signifies a failure in addition to a first threshold that predicts a failure, thus indicating wherein implementing said protection switching operation is performed in response to determining that the failure prediction parameter has exceeded a failure prediction parameter second threshold limit different than the failure prediction parameter first threshold limit. A person of ordinary skill in the art could have been motivated to combine the teaching because Harper discloses a first threshold that predicts a failure is to follow (see column 9 lines 7-14 and lines 25-30 of incorporated by reference Harper '266) and is further concerned with signifying a system element has failed (see column 6 lines 5-25) and having a second threshold that signifies a failure, as per teachings of Smith (see column 6 lines 6-20), provides a known and suitable means to signifying the system element has failed.

Allowable Subject Matter

Claims 4,7,8, 15-18, 20-22, 34, and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 37-48,50,51, and 53 are allowable over the prior art of records.

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The following is an Examiner's statement of reasons for the indication of allowable subject matter: Claims 37 and 45 are allowable over the prior art of record because the Examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine any of the said prior arts.

The reason for allowance for claims 37 is the inclusion of determining that a protection switching priority among a collection of failure predicted system elements applies to the failure predicted one of said protected system elements and downloading service information of the failure predicted one of said protected system elements to the protection system element after identifying the failure predicted one of said protected system elements, wherein downloading said service information is performed after determining that the protection switching priority applies to the failure predicted one of said protected system elements in conjunction with the rest of the limitation set forth in the claim.

The reason for allowance for claims 45 is the inclusion of specifying a protection switching priority for at least a portion of said protected system elements in conjunction with the rest of the limitation set forth in the claim.

The remaining claims, not specifically mentioned, are allowed because they are dependent upon one of the claim mentioned above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

See PTO 892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emerson C. Puente whose telephone number is (571) 272-3652. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W. Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Emerson Puente
Examiner
AU 2113